

GEOGRAPHIC INFORMATION SYSTEMS (GIS) PROGRAMMER/ANALYST

DEFINITION:

Under general supervision, to design, create, modify, and manage Geographical Information Systems (GIS) software application programs and database management systems; and to do related work as required.

DISTINGUISHING CHARACTERISTICS:

This is the advanced/journey level of the GIS classification series. Incumbents in this classification are expected to be proficient programmers and have the ability to conduct systems analysis, design, development, and implementation of GIS computer application systems. The GIS Programmer/Analyst works independently and exercises sound judgment in the completion of projects. Incumbents in this classification may also be required in an advanced/lead capacity, to train and/or supervise technical staff engaged in developing and maintaining geographical information systems.

Positions in this classification may be assigned to an operating department, provide services to other County departments, or coordinate system and program design activities with County departments related to the County wide geographic information system and databases.

The Geographic Information Systems Programmer/Analyst is distinguished from the Geographic Information Systems Specialist by the formers responsibility to design and code computer applications, and develop user requirements into detailed program specifications.

ESSENTIAL FUNCTIONS:

- Uses GIS software and other programming languages to integrate databases, store and manipulate spatial and tabular data, generate maps, and troubleshoot the system.
- Develop and maintain GIS application systems; consult with current and proposed system users to discuss and document project requirements for new and/or modified GIS system changes; and recommend computer-based solutions.
- Write program specifications for system and program design; coordinate testing; and identify and correct problems.
- Monitor, troubleshoot, and document GIS system problems; develop and implement solutions to hardware and software application problems; and oversee maintenance of system.
- Perform GPS mapping; provide Internet and web based support; and develop spatial and non-spatial databases.

ESSENTIAL FUNCTIONS: (continued)

- Oversee and review database creation, application, display and document production to ensure logical flow and conformance with designed specification; and correct problems identified, as needed.
- Perform complex network modeling activities to ensure appropriate program development and system coordination and application utility; and develop and design complex analytical programs.
- Perform a variety of analytical studies related to the development and implementation of the GIS system; evaluate alternatives and make recommendations; and prepare technical reports.
- Research, evaluate, recommend, and install application software and equipment purchases and upgrades.
- Provide user access requirements; and maintain system security.
- Coordinate system design and interface with public and private agencies; and assists in designating controls and audit trails.
- Stay abreast of GIS technological trends.

OTHER FUNCTIONS:

- May represent the department in meetings.
- Perform other job-related duties as required.

A background check may be conducted for this classification.

All Kern County employees are designated "Disaster Service Workers" through state and local laws (CA Government Code Sec. 3100-3109 and Ordinance Code Title 2-Administration, Ch. 2.66 Emergency Services). As Disaster Service Workers, all County employees are expected to remain at work, or to report for work as soon as practicable, following a significant emergency or disaster.

EMPLOYMENT STANDARDS:

Graduation from an accredited college or university with a bachelor's degree in GIS, Geography, Computer Science, Management Information Systems or related field **AND** three (3) years of experience using ArcGIS or related GIS software with at least one (1) year of programming experience, **OR** an equivalent combination of education and experience sufficient to obtain the knowledge and skill to perform the essential functions of the job.

EMPLOYMENT STANDARDS: (continued)

Knowledge of: Knowledge of GIS and computer science principles and practices; mapping principles; system analysis and design practices; the principles and techniques of programming; the principles of documentation/record keeping; and record storage and retrieval.

Ability to: gather and analyze data, reason logically, draw sound conclusions, and make appropriate recommendations; perform systems analysis and programming work; design, new and revise existing systems; troubleshoot, identify and resolve programming problems; respond to, analyze and assess user needs, resolve problems, and determine solutions; write specifications; train users and other technical staff; communicate effectively, both verbal and written; interpret and follow detailed written and oral instructions; prepare clear and concise reports; and establish and maintain cooperative work relationships with staff and people of various professional, vocational and educational backgrounds.

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